



UNITED STATES PATENT AND TRADEMARK OFFICE

*[Signature]*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,585	11/28/2000	Alexander J. Dyakonov	4800-090	8519

7590      04/22/2004

MORGAN & FINNEGAN, LLP  
345 Park Avenue  
New York, NY 10154

EXAMINER	
LOPEZ, CARLOS N	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/723,585

Applicant(s)

DYAKONOV ET AL.

Examiner

Carlos Lopez

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 and 32-74 is/are pending in the application.
- 4a) Of the above claim(s) 4-21 and 41-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 22-30, 32-40 and 46-74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The office action dated 1/28/04 was mailed in error. Applicant's response to the non-compliant amendment, which lacked proper claim identifiers, is acknowledged. The new period for response is 3 months from the mailing date of this action. Please disregard the office action mailed on 1/28/04.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/03/03 has been entered.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1) Claims 1-2, 22, 28-29, 46, and 66-68 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wahle et al (US 4,301,816). Wahle discloses a cigarette filter comprising two zones 31B and 39B (See figure 1). Zone 39b comprises of cellulose acetate fibers, which may include adsorbent substances such as charcoal to remove deleterious substances of the tobacco smoke, meeting the claimed adsorbent material. The claimed ventilating hole approximate to the adsorbent material is deemed as holes 53'.

In regards to the claimed discharging of the carbon monoxide from the holes, it would be inherent or at the least obvious to a person of ordinary skill in the art at the time the invention was made that said discharge would occur since there is no means for stopping the air to come out of the holes when the smoker is not inhaling on the cigarette.

2) Claims 3, 23-27, 30, 32-40, 47-65, and 69-74 are rejected under 35 U.S.C. 103(a) as unpatentable over Wahle et al (US 4,301,816) as applied to claims 1-2, 22, 28-29, 46, 51, and 66-68 above, and in view of Dale et al (US 4,317,460). Wahle is silent adding catalyst to the cigarette filter to further reduce the amount of deleterious

ingredients of the tobacco smoke. Dales teaches that is known to include adsorbent in the cigarette filter to physically remove carbon monoxide but that said physical removal is not sufficient. Dale also discloses that is known to include a catalyst to oxidize carbon monoxide to carbon dioxide (Col. 1, lines 14-23). In particular Dales' invention is drawn to a catalyst retaining its high activity for oxidizing carbon monoxide. Dales' catalyst system for a cigarette filter comprises of a metal component belonging to Groups 6-8 of the periodic table (Column 4, lines 15-50) with a support structure made of a zeolite or alumina (amorphous oxide) (Bridging paragraph of Columns 4 and 5). Dale additionally teaches that the claimed adsorbent material such as granular carbon may be used in the triple filters for smoking products, wherein the middle portion contains the catalyst system or the catalyst system may be part of the whole cigarette filter (Column 6, lines 57-68). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have provided a catalyst system to Wahle's cigarette filter in order to further reduce deleterious ingredients of the tobacco smoke as taught by Dale.

As for claim 23,25 and 50, Dale teaches that transition metals may be used as a catalyst, see col. 4 lines 35-50, thus including the claimed silver and dysprosium transition metals.

As for claim 23 and 48, the venting holes would divert some of the carbon monoxide from being inhaled.

As for claim 24 and 49, the silver and nickel in coming in contact with air provided by the venting holes would convert to silver and nickel oxides.

As for claim 26,51, it would have been obvious to a person of ordinary skill in the art to conduct routine experiments to select the proper silver content as an obvious optimization of result-effective variables to obtain the desired degree of removal of carbon monoxide without affecting the taste of the cigarette.

As for claims 32-33, 55-56 and 72, the propensity to absorb would be dependent on the inhalation time of the smoker.

As for claims 64, 34-38, and 57-58, the catalyst are supported in zeolite or aluminum and thus would be expected to act as absorbents (See bridging paragraph of col. 5-6). Additionally, the zeolite has the claimed size of 4 to 16 angstroms.

As for claim 39 and 59-63, alumina is considered amorphous.

As for claims 46 and 47, the claimed fitting is the tipping paper present in conventional cigarettes in order to join the filter element to the tobacco rod element of a filter cigarette.

In regards to claims 27 and 52, Examiner takes official notice that the claimed inclusion of known catalyst into a cigarette filter is well known in the art as evidenced by Bowen et al (US 6,286,516) in order to the desired smoke component (See Col. 8, lines 25-45).

### ***Response to Arguments***

Applicant's arguments filed 12/03/03 have been fully considered but they are not persuasive. The argument directed to Dale arguing that said reference fails to provide motivation to include venting holes is moot in view of the new ground of rejections.

Art Unit: 1731


Applicant argues that Wahle's venting holes only admit atmospheric air and are not for providing an alternate path for discharging carbon monoxide. As noted above, it would be inherent or at the least obvious to a person of ordinary skill in the art at the time the invention was made that said discharge would occur since there is no means for stopping the air to come out of the holes of Wahle when the smoker is not inhaling on the cigarette. Moreover, the patentability of the instant claimed product does not depend on its function but on its structural features that distinguish it from the prior art. The functional distinction argued and claimed by applicant carries no patentable weight. Moreover, applicant's argued functional limitation does not provide any additionally structure that would distinguish it from Wahle's cigarette filter.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

Application/Control Number: 09/723,585  
Art Unit: 1731

Page 7

C.L  
April 19, 2004